

Open Submission

Industrial Wind Turbines can Harm Humans ¹

Health and Socio-economic impacts

Health Canada Wind Turbine Noise and Health Study

*Health Impacts and Exposure to Wind Turbine Noise:
Research Design and Noise Exposure Assessment*

Submitted by Carmen Krogh, BScPharm ²

September 6, 2012

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Health Canada Wind Turbine Noise and Health Study

*Health Impacts and Exposure to Wind Turbine Noise: Research
Design and Noise Exposure Assessment*

Submitted by Carmen Krogh, BScPharm

September 6, 2012

To:

David S. Michaud, PhD
Principal Investigator
Consumer and Clinical Radiation Protection Bureau
Healthy Environments and Consumer Safety Branch
Health Canada
Email: wind.turbine.health.study@hc-sc.gc.ca or david.michaud@hc-sc.gc.ca

Copy:

The Right Honourable Stephen Harper
Prime Minister of Canada
pm@pm.gc.ca

The Honourable Leona Aglukkaq
Minister of Health
minister_ministre@hc-sc.gc.ca

Dear Dr. Michaud,

Re: Health Canada Wind Turbine Noise and Health Study

Open Submission: Health and socio-economic impacts
Health Canada Wind Turbine Noise and Health Study
Submitted by Carmen Krogh, BScPharm September 6, 2012
Any errors or omissions are unintended

1 Purpose

The purpose of this submission is to contribute to the Health Canada Wind Turbine Noise and Health Study design and to inform the Health Canada study team and others about the serious harm that has occurred to a family exposed to an industrial wind energy project.

Several turbines are sited close to the family home and with the onset of adverse health effects, this has resulted in the family having to vacate their home.

Due to my concern regarding the family's deteriorated health and quality of life status, I respectfully request that Health Canada take action to resolve the issues regarding this family. Resolution would include emergency funding to support the family's relocation and the restoration of physical, mental and social well being as well as their financial status.

I have provided a copy of my comments to The Right Honourable Stephen Harper, Prime Minister of Canada, The Honourable Leona Aglukkaq, Minister of Health and the public.

2 Author's note

This submission is being made on request and on behalf of a family that wishes to remain confidential due to personal circumstances.

For the last several years this family reports it has tried to bring attention to the health hazard that is created by the operation of a wind turbine facility, where the closest wind turbine to the family's home is 400 metres away. Despite appeals to all levels of government, the emergency situation that the family has been forced into has not been recognized or addressed.

This submission serves to bring attention to some of the health outcomes that do not appear to be considered as part of the "*Health Canada Wind Turbine Noise and Health Study*." This is an example of a situation that in order to achieve resolution, clearly requires government attention. The issues are similar to those being experienced and reported by many other Canadians who have had wind turbines built too close to their homes.

While the identity of the family is not part of this public submission, the author is available to facilitate communication between government agencies and this family. The family has asked I convey that they feel as though municipal, provincial, and federal government agencies/authorities have not responded appropriately and fairly to their situation. They

feel as though it is necessary that someone of independence be involved in the process going forward. This is why they have asked me to make this submission.

3 Disclaimer

The contents of this submission should not be used to infer any bias for or against wind energy.

This submission is not to be associated with and/or used to characterize any individual and/or organization.

I have received no financial support for the research, authorship, and/or publication of this submission.

Any errors are unintended.

4 The problem

I am frequently in contact with those reporting the serious health and socio-economic consequences that are occurring when industrial wind facilities are sited in close proximity to residents.

The family reports the occurrence of serious, adverse physical and mental health effects has had drastic impacts on their health, home life, quality of life, and financial security. The family describes it as such:

"For the last four years our lives have been thrown into turmoil by unsafe industrial wind turbines that were built too close to our home.

When we first began to notice the physiological effects that the wind turbine emissions were having on our bodies, we felt as though we just needed to make the authorities aware of the issue and then there would be a good faith effort to address it and resolve it. Instead, considerable time and resources, both private and public, have been used to deny that a problem even exists. In some cases, the contention has been made that all negative effects being experienced are caused by us, and are our fault.

In good faith, we have participated in the processes of the Ontario Ministry of the Environment and other authorities. There has been no recognition, no mitigation,

and no resolution offered. As the wind turbines continued to operate, one as close as 400 metres away from our home, the effects of sleep disturbance compounded; our health continued to decline, and certain medical issues became serious to the point of being potentially fatal. One of the medical issues that I was experiencing was uterine blood haemorrhaging. I had lost so much blood that I found myself in the Emergency Room of the local hospital, on the brink of having a stroke. At that time, it was obvious, beyond any doubt that we could not continue to live at our home.

Since May 2010, we have been renting safe houses to stay at while we continue to maintain our home, including paying the mortgage, property taxes, hydro and insurance which totals approximately \$1200 per month. The expenses for our rental house alone have totalled approximately \$30,000 over the last 28 months. The financial burden has been extremely stressful. It is worsened by the fact that we are deprived of the amenities and comforts of our "home". When the stress and the sadness become overwhelming, we remind ourselves of how lucky we are that we have been to be able to leave our home. We know that for some, this is not an option.

The following are some details regarding medical treatments received by ONE member of our family since the commencement of operation of industrial wind turbines near our home:

In the 42 month-period between April 2009 and September 2012:

- 33 appointments with family doctor. (By comparison, throughout the 50 month-period between February 2005 and April 2009, there were a total of 9 visits to family doctor.)

In addition to visiting my family physician:

- Sleep investigation at sleep disorders clinics - 2
- Investigation by specialists in otolaryngology, audiology, heart and stroke, vascular, neurology, internal medicine
- Ultrasounds, CT scans and other procedures
- Surgical procedures (3)
- Magnetic Resonance Imaging (head) - 2
- Heart monitoring
- Stress test
- Numerous EKG, blood work
- Emergency room visits (3)

- Other consultations

For the last four years, every action of every day has in some way been affected by this disruption to our home life. We have been forced to make life changing decisions because of the imposition of industrial wind turbines into our homes.

Our ability to make rational decisions has been precluded by the inconsistent messages and actions of authorities. We have watched as the discourse has shifted from the absolute denial that wind turbines cause harm to human health, towards the recognition that sleep disturbance and other health effects are "expected" to be experienced by a "nontrivial percentage of persons..." or "15 percent of a population exposed..." etc. We do not think it is reasonable that authorities have not taken urgent, drastic measures to address the harm that is being reported by Canadians and to prevent it from happening to others." ³

The family report that stress associated with community divide, vacating their home, diminished financial stability, and loss of property value exacerbated their situation resulting in additional stress, anxiety, frustration, grief, and loss of trust in the systems that they thought would protect them from harm. The family report this is a traumatic experience from which they will not recover easily.

The family states:

"Much of the stress of our situation has been exacerbated by the strain on social relationships. Obviously someone who possesses no expertise on the issue is not qualified to opine on the health hazard or our health status. However, this has not prevented members of the public (including landowners participating in the wind turbine project that surrounds our home) from aggressively pushing their points of view. For example, we continuously hear statements such as:

"The wind turbines are not causing harm to your health."

"They are not going to shut the wind turbines down."

"They should not shut the wind turbines down."

"You should sell your house and move on."

These are not helpful statements, and trying to find one's place in the community is complicated by how hurtful these kinds of comments are. It is very clear to us--in fact--it cannot be denied, that the wind turbines around our home are hazardous to our health. It is not reasonable that we should be expected to be able to make

decisions when what we know to be true is being denied by others who are not qualified to hold opinions.

Very early in the process we realized that the authorities were not engaged in a good faith effort to understand and mitigate the situation. We had no other recourse but to launch a civil claim against the owner/operator of the industrial wind turbines. The claims relate to negligence, nuisance, trespass, strict liability and Rylands and Fletcher. The claim seeks an injunction and damages for losses incurred. The stress of pursuing a legal claim, in addition to the other stresses of our lives presently is overwhelming. We are aware that it is unrealistic for us to expect that we can afford to pursue the claim against a defendant who is part of a billion dollar, industrial, energy complex that has the support of the Ontario government and others, and which cannot afford to have a precedent set in court that enjoins the operation of a wind turbine project because of its hazardous nature. It is our expectation that Canadian governments should endeavour to recognize known health hazards and take actions to protect the health of Canadians. There should be a minimum safe standard for the separation distance between an industrial wind turbine and a home. We feel that it has become increasingly clear that 400 metres is not an adequate separation distance for an industrial wind turbine from a family's home. We do not feel that it is reasonable that we should have to have this recognized in a court; this is a matter of public policy that should have been addressed long ago.

Over the last several years we have met and communicated with many others whose lives have been impacted by the imposition of industrial wind turbines close to their homes, or close to the homes of their friends and families. These people consistently feel overwhelmed and isolated. While some may have the choice to leave, some do not. It is very discomfoting to realize that there could be children who are being harmed by nearby wind turbines, where parents may not understand what is happening or are unable to take action to protect the children. "

The family reports it feels as though they have to sacrifice money for health.

"We know many people whose financial security depends on their ability to live at and use their homes. For rural residents especially there is an unquantifiable difference between "property value" and a property's "market value". Property value relates to our ability to enjoy and use property to live, earn income, grow food, age-in-place, and enjoy leisure time. For some, market value is irrelevant until it is necessary to sell, which to many rural residents, is never part of the plan.

In many rural communities where wind turbines have been developed, residents trace their roots back many generations. Residents are proud of their heritage and are committed to the vitality of their communities. Residents are fiercely protective of the environment and feel blessed by nature's abundance. Like many Ontarians, we felt as though we lived in the most beautiful part of the Province.

The conversion of agricultural land to be used for industrial wind turbines changes the character of the community. The imposition of these changes without proper regard and accounting of all of the environmental effects creates significant burdens for rural residents. Across the world, the development of industrial wind turbine projects has created conflict in communities. This is not attractive to prospective buyers and the stigma is insurmountable. Though the authorities may not officially recognize it, industrial wind turbines can be hazardous to human health and can totally destroy property value. Citizens are aware of this and react accordingly.

The Ontario government consistently refers to a 550 metre "minimum" separation distance between homes and industrial wind turbines. At our house there are two wind turbines less than 550 metres away. If we were to sell we would be obliged to disclose the health effects that we experienced and attribute to the wind turbines. Obviously the potential pool of buyers for our home is limited by these factors. Why should we be forced to sell and incur this loss of equity?

We know others who are aware or suspect that nearby wind turbines are negatively affecting their health, but who cannot afford to lose equity in their homes. They become prisoners, and are, in reality, being harmed in their own homes. And while it may be one thing when it happens to adults, it is more unacceptable if there are children involved."

The adverse effects have been reported during the Standing Committee on the Ontario Green Energy and Green Economy Act hearings of 2009.

The representatives of a number of families reported on the emotional and social stresses and the personal and other costs incurred which were associated with a wind energy project.

The first representative states:

"Emotional and social stresses: We are quizzed or defending our health problems at community events such as hockey games, shopping or church. Dysfunctional

community relations have been created by the wind project representatives and some community members trying to discredit the validity of our problems.

The family unit for each family has deteriorated and has been torn apart. We begged for sleep, and four families were billeted by the wind company from their homes for 90 to 180 days in motels, hotels and a rooming house. The consistent stress has broken apart the family unit—no gatherings, few or no celebrations at home. At present, one family has purchased a separate residence to live in, and two others had to, at the expense of thousands of dollars, modify their hydro connection to try and live in their homes that they've lived in for 19 to 35 years.

Due to concerns for the health of grandchildren, grandparents, older children, extended family members and friends, we all strongly discourage extended visits to our homes. We had to meet somewhere else other than our homes for celebrations.

Neighbours, business acquaintances and media personnel from two different networks have also felt the pressure in the chest and ears and ringing in the ears while in our homes. In an open invitation to the Premier and any other politicians and their families to pack their bags and live in one of our members' homes for two weeks, our MPP suggested that we might trade by living beside a pig barn or beside a grain elevator.

There are additional points—in red—that will help support that these comments of discrediting people's health are not founded.

Sleep deprivation; sleep disturbances; poor-quality sleep; humming in the head by the ears; edginess; a feel-ing as if you've had five cups of coffee; bad temper; heart palpitations; heaviness in the chest; pains in the chest like needles; increased blood pressure, 217 over 124; uncontrollable ringing in the ears; earaches; sore eyes, like you have sand in them; digestive problems which continued for months; headaches which caused you to be bedridden; the sensation of your skin crawling or being bitten by bugs; sore joints; nosebleeds; sores on feet that would not heal until you moved out of your home; inability to concentrate or form words; a severe feeling of being unwell; bedridden for days; depression; tiredness; anxiety; stress—these are the signs and symptoms we have experienced over the past 17 months. Note that the above all start to subside when you leave the polluted environment of your home. The health changes are individual. Even the pets are affected while in the home—losing hair, sore ears—but not when away from the home.

The long-term health effects have also started to show. There's an increased sensitivity to certain sounds and high-frequency lighting, such as in the local stores, and in this room as well. You feel ill upon entering the building. Hearing difficulty has occurred. What other effects will occur?

Just like the first group of smokers, we counted on the government we hired and paid our tax money to, to have intelligently had all the facts determined before any wind project began.

Who is accountable for the unseen health changes occurring within our bodies from basically living in a vibrating microwave? What protection is there for a developing two-year-old who cries endlessly and pulls at her ears when she's in her home, but not when she's away from the project? Who's accountable to the young family who are expecting their second child? What if there's a deformity or a miscarriage resulting from infra-sound, low-frequency sound and the electrical pollution?

The health costs of four families have impacted the health insurance plan 61 times, strictly for health problems due to the two factors stated previously. I had a local hospital finance department calculate a rough estimate for the bill of one family member—\$5,000 for one family member. Fourteen ER visits; 19 doctor visits; seven specialist visits, for ear, foot and heart; blood work, six times; audiologist, five times; CT scans, twice; heart machines and stress tests, five; Doppler testing, one; X-ray, one; urine tests, one—do the math. This is just four families so far. Who's going to pay for the health costs due to the health effects of wind projects?"⁴

The second representative states:

"I'm going to talk about the financial impact, the cost, to us as the homeowners.

Each family has incurred additional costs from budgets for food, fuel, laundry and doctor visits while living away from our homes. Family events had to be held in restaurants. There is wear and tear on our vehicles. There is the extra cost of extensive phone bills from trying to get the problems fixed. There is the price of putting isolators on our homes to protect our families from the unfiltered power. There's the cost of going to meetings. There's loss of productivity due to sleep deprivation. A loss of three weeks from work occurred.

The market value of a property is determined by what buyers are willing to pay for it after it is exposed to the market for a reasonable period of time. Affecting market value is the saleability of a property. The more saleable, the higher the value.

Conversely, if there are factors negatively affecting the saleability of a property, the value will be reduced, or it will become much more difficult to sell, or both. If there are factors negatively affecting the property, or unknowns—or in this case, controversy—surrounding a particular property, while those conditions exist, the property will not be saleable at any price. Whether the market value is sustainably reduced or the property is unsaleable, it is a major cost or liability to the owner. That is from a real estate agent in Kincardine.

Ontario common law and MLS rules and regulations set out for Ontario realtors all require full disclosure of factual information regarding properties offered for sale by owners. This means an owner is legally obligated to disclose any information known or expected about a property that may affect a buyer's decision to purchase a property.

My real estate agent tells me our farm is unsellable. Our homes are unsellable or of zero value. Buying a second home to live in, which I've done—possible lawyer fees, possible appraisal costs. Our lives are upside down for the last 18 months, and how do you put a cost on that? This is like someone committing a crime, going to jail for, say, 10 years and then finding out after DNA tests, "Oh, you're innocent." How do you get that time back at our ages?

There have been other costs to Ontario Hydro and Hydro One for testing our problems, which were not caused by them. Values of houses near us are going down. The township lost tax base assessment. I and Sandy have appealed to MPAC to reassess our homes. The drugs are covered, and also to our own drug plans we're going to have to pay more money—and the Minister of the Environment." ⁵

5 Impact on property values

Many families consider their home is a significant investment. It may represent their life savings which financially secures their retirement.

Typically, when reports of a risk of adverse health effects become known, the resale value of a property is reduced or in some cases, the property is unsaleable. In many jurisdictions, the homeowner selling the home must disclose all defects, including negative effects, noise or other environmental pollution and other issues associated with the sale of a home. The real estate agent must also disclose negative issues to the buyer.

An example of the disclosure associated with the sale of a home and / or listing:

"Located close to City Rd 124 on Grey Rd 4, set back from the road – AND away from the wind-mills...*Price Reduced to...*" ⁶

A CBC report by Nicol and Seglins:

"The CBC has documented scores of families who've discovered their property values are not only going downward, but also some who are unable to sell and have even abandoned their homes because of concerns nearby turbines are affecting their health." ⁷

This report interviewed two members of the Clear Creek community who describe the impact regarding their property:

"I have to tell you not a soul has come to look at it," says Stephana Johnston, 81, of Clear Creek, a hamlet on the north shore of Lake Erie about 60 kilometres southeast of London." ⁸

She put her two-acre, waterfront property up for sale before the turbines appeared in Clear Creek, for what three agents said was a reasonable price of \$270,000.

Two years after the turbines appeared, she took \$175,000, and she felt lucky to do that... "I had to get out," said Armstrong. "It was getting so, so bad. And I had to disclose the health issues I had. I was told by two prominent lawyers that I would be sued if the ensuing purchasers were to develop health problems." ⁹

Realtor association finds 20 to 40 per cent drops in value Armstrong's experience is backed up in a study by Brampton-based realtor Chris Luxemburger. The president of the Brampton Real Estate Board examined real estate listings and sales figures for the Melancthon-Amaranth area, home to 133 turbines in what is Ontario's first and largest industrial wind farm. "Homes inside the windmill zones were selling for less and taking longer to sell than the homes outside the windmill zones," said Luxemburger."

On average, from 2007 to 2010, he says properties adjacent to turbines sold for between 20 and 40 per cent less than comparable properties that were out of sight from the windmills." ¹⁰

Lanslink Appraisals reports on a "Diminution in Land Value" and the loss of property value.¹¹

Reports in Canada and globally are emerging regarding loss of property value or residents vacating their homes.^{12, 13, 14, 15}

Leake from the United Kingdom reports:

"Wind farms can cause property blight to nearby homes, according to what could become landmark rulings by a government agency.

The Valuation Office Agency (VOA), which decides council tax valuations, has accepted that having wind turbines built near homes can sharply decrease their value and has, as a result, moved some into a lower tax band. The decisions are a serious threat for the wind farm industry. Until now, such negative views have been rejected by the industry and planners as simply subjective opinion.

In one of the latest cases, a couple living near the 22-turbine Fullabrook wind farm near Braunton, Devon saw the price of their home fall from about £400,000 to £300,000. Three of the turbines are within 650 yards of their home. That figure is based on a valuation by local estate agents and the couple have not yet tried to sell. However, they fear that in reality the constant noise and visual intrusion mean they could get even less — or that their home might be unsaleable. When they put those points to the VOA, it agreed, moving their home from band F to band E, saving them about £400 a year.

It follows a 2008 ruling in which Jane Davis, of Deeping St Nicholas, near Spalding, Lincolnshire, was given a discount on her council tax because the value of her £170,000 farmhouse home had been reduced by an eight-turbine wind farm 1,000 yards away."¹⁶

Madsen from Cape Vincent, New York state reports:

"Sales records show that Cape Vincent has had a steeper decline in residential property sales than its neighbors and real estate professionals are starting to blame proposed wind power developments. "People do not want to buy near windmills," said Amanda J. Miller, owner of Lake Ontario Realty, Dexter, who specializes in waterfront property sales. "They avoid purchasing in towns like Cape Vincent."

In other countries that have had wind power development for a while, they have seen 40 percent to 60 percent drops in resale values, she said. Closer to home, she's

had clients pull out of deals and refuse to consider areas that are possible sites for wind turbines.

"Even if people don't mind looking at it, they're not going to put their investment in an area where they're going to have turbines depreciate it," Ms. Miller said in a phone interview on Monday. "They don't want to look at them, see them, and others don't want to buy because they don't know what the wind turbines will do for property values." ¹⁷

A report from Michigan, U.S. "...20 Huron County residents who filed a lawsuit claiming the Ubyly-area Michigan Wind 1 development has harmed their quality of life and lowered their property values have agreed to settle with the wind companies." ¹⁸

From California, U.S. a report relating to comments from a real estate appraiser: "McCann stated in no uncertain terms that property value losses of about 25 percent are becoming the norm within two miles of a wind farm." ¹⁹

Other reports include:

§ A report from Arizona, U.S., regarding a legal action. ²⁰

§ A report from the County Board of Lake County, Illinois, U.S., regarding property values: "...residents have already seen real estate values drop due to the recession and that such projects could worsen the impact for neighbors." ²¹

6 Conclusion

Indications are the Michaud et al (2012)²² study design paper is narrowly focused on noise; however, reports of socio-economic issues may also contribute to risks to health.

A witness for the Ontario, Canada Ministry of the Environment stated during testimony under oath at an Environmental Review Tribunal:

"We are very aware that many people don't like them because they adversely affect their property values; indeed, we had friends in that situation." ²³

The Counsel for the Ontario Ministry of Environment states:

"We will see in the course of this hearing that lots of people are worried about windmills. They may not like the noise, they may think the noise makes them sick,

but really what makes them sick is just the windmills being on the land because it does impact their property values. That's what makes them sick is that, you know, they'll get less money for their properties, and that's what's causing all this annoyance and frustration and all of that." ²⁴

"...it's the social implications where people are complaining on web sites about how their property values have gone down." ²⁵

The Environment Protection Act (Ontario) notes that an "adverse effect" can include "loss of enjoyment of normal use of property":

"adverse effect" means one or more of,

- (a) impairment of the quality of the natural environment for any use that can be made of it,
- (b) injury or damage to property or to plant or animal life,
- (c) harm or material discomfort to any person,
- (d) an adverse effect on the health of any person,
- (e) impairment of the safety of any person,
- (f) *rendering any property or plant or animal life unfit for human use,*
- (g) *loss of enjoyment of normal use of property,* and
- (h) interference with the normal conduct of business;" [*emphasis added*]²⁶

Subsection 47.2(1) states "(t)he purpose of this Part is to provide for the protection and conservation of the environment." The EPA contains no definition of "environment." But section 47.1 provides that "(i)n this Part, 'environment' has the same meaning as in the *Environmental Assessment Act*" (the "EAA"), which states:

"environment" means,

- (a) air, land or water,
- (b) plant and animal life, including human life,
- (c) the *social, economic and cultural conditions that influence the life of humans* or a community,
- (d) *any building, structure, machine or other device or thing made by humans,*
- (e) any solid, liquid, gas, odour, heat, **sound, vibration** or radiation resulting directly or indirectly from human activities, or
- (f) any part or combination of the foregoing and the interrelationships between any two or more of them, in or of Ontario. [*Emphasis added*]²⁷

The Counsel for the Director, Ministry of Environment confirmed:

"The term "environment", is defined as including: "human life" the "social, economic and cultural conditions that influence the life of humans or a community", "any building, structure, machine or other device or thing made by humans", any "...sound, vibration or radiation resulting directly or indirectly from human activities", and "any part or combination of the foregoing and the interrelationships between any two or more of them in or of Ontario" must be interpreted purposefully. Accordingly all aspects of the environment as defined in the EAA must be properly taken into consideration." ²⁸

The World Health Organisation's definition of health:

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." ²⁹

Health Canada states: "Federal, provincial and territorial governments and health officials have accepted the WHO's definition of health:" ³⁰

The World Health Organization confirms:

"Pollution and degradation of the indoor environment cause illness, increased mortality, loss of productivity, and have major economic and social implications....The health effects of indoor noise include an increase in the rates of diseases and disturbances... these illnesses, and the related reduction in human productivity, can result in substantial economic losses." ³¹

As the result of the anticipated proliferation in the future ³² of industrial wind turbines in Canada, it is expected that more families will be at risk of harm.

Health Canada's "Mission and Vision" includes:

"Health Canada is the federal department responsible for helping the people of Canada maintain and improve their health.

Health Canada is committed to improving the lives of all of Canada 's people and to making this country's population among the healthiest in the world as measured by longevity, lifestyle and effective use of the public health care system." ³³

Health Canada's "Objectives" include:

"By working with others in a manner that fosters the trust of Canadians, Health Canada strives to:

- Prevent and reduce risks to individual health and the overall environment;
- Promote healthier lifestyles;
- Ensure high quality health services that are efficient and accessible;
- Integrate renewal of the health care system with longer term plans in the areas of prevention, health promotion and protection;
- Reduce health inequalities in Canadian society; and
- Provide health information to help Canadians make informed decisions." ³⁴

This submission gives a brief overview of a rural family's experiences and contributes to assisting the Health Canada Study Team with its Study Design.

As well, indications are there is a need to conduct an Inquiry-investigation of the issues relating to industrial wind turbine development in quiet rural areas.

Due to my concern regarding this family, I respectfully request that Health Canada take action to resolve the issues regarding this and other families reporting serious harm and who have vacated their homes or wish they could afford to do so. This would include emergency funding to relocate the families to restore physical, mental and social well being as well as their financial status.

7 Recommendations

That Health Canada:

- Conduct an inquiry-investigation into the health including socio-economic impacts related to industrial wind turbine operations.
- The inquiry-investigation be conducted prior to finalizing the Health Canada *Wind Turbine Noise and Health Study: Health Impacts and Exposure to Wind Turbine Noise: Research Design and Noise Exposure Assessment*.
- Take action to resolve the issues of this and other families reporting serious harm and provide emergency funding to relocate the families to restore physical, mental and social well being as well as their financial status.

Respectfully submitted on behalf of this and other families,

Carmen Krogh, BScPharm
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Attachment

Official Report Journal of Debates (Hansard) STANDING COMMITTEE ON GENERAL GOVERNMENT 15 APRIL 2009

¹ Excerpted from an Ontario Environmental Review Tribunal Decision, July 18, 2011:

“This case has successfully shown that the debate should not be simplified to one about whether wind turbines can cause harm to humans. The evidence presented to the Tribunal demonstrates that they can, if facilities are placed too close to residents. The debate has now evolved to one of degree.” Case Nos.: 10-121/10-122 Erickson v. Director, Ministry of the Environment Environmental Review Tribunal, Decision, p 207

² Submitted on request and behalf of a family negatively affected by an industrial wind turbine facility

³ Personal comments by the residents and submitted on their behalf

⁴ Representative 1, Official Report Journal of Debates (Hansard) STANDING COMMITTEE ON GENERAL GOVERNMENT 15 APRIL 2009 P 547

⁵ Representative 2, Official Report Journal of Debates des débats (Hansard) STANDING COMMITTEE ON GENERAL GOVERNMENT 15 APRIL 2009 P 548

⁶ Krogh, personal communications, 2012

⁷ John Nicol and Dave Seglins, (Oct 1, 2011) CBC News Ontario wind power bringing down property values <http://www.cbc.ca/news/canada/ottawa/story/2011/09/30/ontario-wind-power-propertyvalueshtml>

⁸ John Nicol and Dave Seglins, (Oct 1, 2011) CBC News Ontario wind power bringing down property values <http://www.cbc.ca/news/canada/ottawa/story/2011/09/30/ontario-wind-power-propertyvalueshtml>

⁹ John Nicol and Dave Seglins, (Oct 1, 2011) CBC News Ontario wind power bringing down property values <http://www.cbc.ca/news/canada/ottawa/story/2011/09/30/ontario-wind-power-propertyvalueshtml>

¹⁰ John Nicol and Dave Seglins, (Oct 1, 2011) CBC News Ontario wind power bringing down property values <http://www.cbc.ca/news/canada/ottawa/story/2011/09/30/ontario-wind-power-propertyvalueshtml>

¹¹ Lansink Appraisals, January 20, 2012, Diminution in Land Value, Injurious Affection, Wind Turbine Purchase and Resale © www.lansinkappraisals.com

¹² Senator Sean T. Kean, District 11 (Monmouth), Senator Andrew R. Ciesla, District 10 (Monmouth and Ocean), Co-Sponsored by Senator Gill, An Act concerning wind energy and supplementing Titles 13 and 40 of the Revised Statutes, the Senate and General Assembly of the State of New Jersey. Introduced November 8, 2010 Retrieved from http://www.njleg.state.nj.us/2010/Bills/S2500/2374_I1.PDF

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